

CLAIMS

1. A fuel cell comprising a tubular casing, an electrolyte layer received in said tubular casing, and a pair of gas diffusion electrodes interposing said electrolyte layer and defining a fuel gas passage and an oxidizing gas passage, respectively, wherein:

each gas diffusion electrode is formed by stacking a plurality of layers of material therefor.

2. A fuel cell according to claim 1, wherein each gas diffusion electrode is formed by stacking a plurality of layers of material therefor in the axial direction of said tubular casing.

3. A fuel cell according to claim 2, wherein said tubular casing is also formed by stacking a plurality of layers of material therefor in the axial direction of said tubular casing.

4. A fuel cell according to claim 3, wherein said material for said tubular casing is same as said material for said electrolyte layer.

5. A fuel cell according to claim 4, wherein said gas passages are defined by separating an interior of said tubular casing with said electrolyte layer and said gas diffusion electrodes.

6. A method for fabricating a fuel cell comprising a tubular casing, an electrolyte layer received in said tubular casing, a pair of gas diffusion electrodes

interposing said electrolyte layer and defining a fuel gas passage and an oxidizing gas passage, respectively, characterized by the steps of:

forming each gas diffusion electrode by stacking a plurality of layers of material therefor;

forming said tubular casing; and

placing electrolyte material between said gas diffusion electrodes.

7. A method for fabricating a fuel cell according to claim 6, wherein the step of forming each gas diffusion electrode consists of stacking a plurality of layers of material therefor in an axial direction of said tubular casing.

8. A method for fabricating a fuel cell according to claim 7, wherein the step of forming the tubular casing also consists stacking material therefor in the axial direction of said tubular casing at the same time as forming said gas diffusion electrodes.

9. A method for fabricating a fuel cell according to claim 6, wherein the step of forming said tubular casing comprises the step of filling the same material as said electrolyte layer into a mold frame surrounding said gas diffusion electrodes and solidifying said material following the step of forming said gas diffusion electrodes.

10. A method for fabricating a fuel cell according to claim 6, wherein the step of forming said gas diffusion electrodes by stacking consists of a member selected from a group consisting of coating followed by drying, curing or sintering, physical vapor deposition, chemical vapor deposition, plating, casting and flame spraying.